What is claimed is:

1. A method of processing an image, comprising:

receiving an image having multiple objects, each object having an original outline;

selecting objects from among the multiple objects to be abstracted objects;

defining a planar-mapping outline for each object, the planar-mapping outline of each selected object being an enclosing outline that encloses the object, and the planar-mapping outline of each object not selected being the original outline of the object;

using the planar-mapping outlines of all the objects to divide the image into non-overlapping regions; and

flattening each region.

2. The method of claim 1, wherein selecting objects includes selecting text objects.

3. The method of claim 1, wherein selecting objects includes selecting objects having resolution-dependent outlines.

4. The method of claim 1, wherein a first region contains a portion of a transparent object overlying a portion of a second object, and wherein flattening the region includes blending the transparent object portion with the second object portion in the region.

5. The method of claim 1, wherein defining a planar-mapping outline includes defining a polygon to enclose a corresponding selected object with a predefined maximum number of edges.

6. The method of claim 5, wherein the polygon is calculated to have a smallest area while enclosing the corresponding selected object.

7. The method of claim 1, wherein defining a planar-mapping outline for a selected object includes defining a quadrangle.

8. The method of claim 7, wherein defining a quadrangle includes defining a bounding box of the selected object.

9. The method of claim 8, wherein defining a bounding box includes determining an orientation of the bounding box that results in a minimal bounding-box size.

10. The method of claim 1, wherein each planar-mapping outline is represented in an analytical resolution-independent form.

11. The method of claim 1, wherein dividing the image into regions includes associating with each region all objects having a planar-mapping outline that encloses the region.

12. The method of claim 11, wherein flattening a region comprises:

determining if there is an abstracted object associated with the region;

when there are no abstracted objects associated with the region, determining a color of the region based on properties of the objects associated with the region; and

when there is a single abstracted object associated with the region, determining a background color and a foreground color of the region, the background color being based solely on properties of non-abstracted objects associated with the region and the foreground color being based on properties of all the objects associated with the region.

13. The method of claim 12, wherein determining background and foreground colors of the region further comprises outputting to the output stream the determined background color and outputting to the output stream the determined foreground color and an associated clipping path defined by the original outline of the abstracted object.

14. The method of claim 12, wherein determining the color of the region when there are no abstracted objects associated with the region further comprises outputting the determined color to an output stream of the method

15. The method of claim 14, wherein determining background and foreground colors further comprises determining background and foreground colors of the region for each abstracted object associated with the region when there are multiple abstracted objects associated with the region.

16. The method of claim15, wherein determining background and foreground colors for each abstracted object includes:

selecting an abstracted object associated with the region;

starting a new region flattening process to determine a background color of the region, ignoring the selected abstracted object in the new region flattening process, and outputting to the output stream the background color; and

starting a new region flattening process to determine a foreground color of the region, treating the selected abstracted object as a non-abstracted object in the new region flattening process, and outputting to the output stream the foreground color with an associated clipping path defined by the original outline of the selected abstracted object.

17. The method of claim 17, wherein outputting foreground color includes setting multiple clipping paths of abstracted objects associated with the region to define an area of the region that is inside an intersection of original outlines of the abstracted objects.

18. The method of claim 11, wherein flattening a region includes rasterizing portions of objects that are inside the region.

19. The method of claim 1, wherein defining a planar-mapping outline includes rasterizing a selected object and using the raster's rectangular bounds as the selected object's planar-mapping outline, whereby the selected object becomes a non-abstracted object.

20. A method for flattening an image, comprising:

receiving an image having multiple objects, each object having an original outline;

selecting objects from among the multiple objects to be abstracted objects;

defining a planar-mapping outline for each object, the planar-mapping outline of each selected object being an enclosing outline that encloses the object, and the planar-mapping outline of each object not selected being the original outline of the object;

using the planar-mapping outlines of the non-abstracted objects to separate the image into regions that can overlap, none of the regions being intersected by a planar-mapping outline of a non-abstracted object; and

flattening each region.

21. The method of claim 20, wherein selecting objects includes selecting text.

22. The method of claim 20, wherein selecting objects includes selecting objects having resolution-dependent outlines.

23. The method of claim 20, wherein defining an enclosing outline for a selected object includes defining a bounding box of the selected object.

24. The method of claim 23, wherein defining a bounding box includes determining an orientation of the bounding box that results in a minimal bounding-box size.

25. The method of claim 20, wherein each planar-mapping outline is represented in an analytical resolution-independent form.

26. A region formed from planar mapping, comprising:

multiple sub-regions defined by one or more clipping paths of original outlines of objects associated with the region, wherein each sub-region has a color value that is different from color values of other sub-regions in the region.

27. A method of planar mapping, comprising:

receiving an image having multiple objects, each object having an original outline, the image having at least one of a text object and an object with a resolution-dependent outline;

defining a planar-mapping outline for each text object and each object with resolution-dependent outline, the first planar-mapping outline of an object being a bounding box of a minimal size that encloses the object, the bounding box oriented about the object to reduce the size of the bounding box;

using as the planar-mapping outline of each of the remaining objects in the image the original outline of the object; and

using the planar-mapping outlines of all the objects to divide the image into non-overlapping regions and associating with each such region all objects having a planar-mapping outline that encloses the region.